

CLAIMS

We claim as deserving the protection of Letters Patent:

1. A method for the wireless retrieval of information regarding mobile bodies and for disseminating content based on retrieved information, the method comprising the steps of:

5 providing a wireless communication sending unit for being retained relative to a first mobile body wherein the wireless communication sending unit comprises a means for emitting a signal;

10 providing a wireless communication receiving unit for being retained relative to a second mobile body wherein the wireless communication sending unit comprises a means for receiving the signal emitted by the wireless communication sending unit;

providing a central server for retaining information;

providing a wireless access point; and

15 establishing a wireless local area network arrangement involving the wireless communication sending unit, the wireless communication receiving unit, the central server, and the wireless access point.

2. The method of claim 1 further comprising the step of causing a signal to be emitted from the wireless communication sending unit.

20 3. The method of claim 2 further comprising the step of receiving a signal from the wireless communication sending unit by the wireless communication receiving unit when the wireless communication sending unit is in a given proximity to the wireless communication receiving unit thereby enabling a determination of whether the wireless communication sending unit is in the given proximity with the wireless communication receiving unit.

4. The method of claim 3 further comprising the step of providing an identifying association between the wireless communication sending unit and the first mobile body and wherein the step of emitting a signal from the wireless communication sending unit comprises emitting periodic identification signals.

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5. The method of claim 4 wherein the central server retains information regarding the first mobile body and further comprising the step of enabling a transmission of information regarding the first mobile body to the wireless communication receiving unit in response to a receipt of a signal from the wireless communication sending unit by the wireless communication receiving unit.

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6. The method of claim 5 wherein the wireless communication sending unit operates under an infrared wireless communication protocol and wherein the wireless communication receiving unit comprises an infrared enabled handheld electronic information device.

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7. The method of claim 6 wherein the wireless local area network employs a Wireless Fidelity (Wi-Fi) network architecture.

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8. The method of claim 5 wherein the wireless communication receiving unit has a display screen for displaying transmitted information regarding the first mobile body.

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9. The method of claim 5 wherein the central server retains a history of signals received by the wireless communication receiving unit from the wireless communication sending unit and of information transmitted to the wireless communication receiving unit in response to the receipt of signals from the wireless communication sending unit.

10. The method of claim 1 wherein the step of providing a wireless communication sending unit comprises providing a plurality of wireless communication sending units, each wireless communication sending unit for being retained relative to a different mobile body.
- 5 11. The method of claim 10 further comprising the step of enabling an emission of periodic signals from each of the plurality of wireless communication sending units and further comprising the step of providing a means for preventing cross talk between the plurality of wireless communication sending units.
- 10 12. The method of claim 11 wherein the periodic signals emitted by each wireless communication sending unit have at least one wait time and wherein the means for preventing cross talk between the plurality of wireless communication sending units comprises a means for individually varying the wait time for each wireless communication sending unit.
- 15 13. The method of claim 12 wherein each periodic signal comprises at least one transmission of an identification number for each wireless communication sending unit and wherein the means for selectively varying the wait time comprises a means for generating a random wait time based on a mathematical calculation involving the identification number of the wireless communication sending unit.
- 20 14. The method of claim 13 wherein each periodic signal emitted from each wireless communication sending unit comprises an emitting of the identification number for the wireless communication sending unit a plurality of times with each emitting of the identification number separated by a between-number wait time and with each periodic signal separated by a between-signal wait time.
- 25 15. The method of claim 13 wherein the identification number for each wireless communication sending unit is formed by a plurality of bytes and wherein the mathematical equation involving

the identification number involves a successive multiplication of the bytes forming the identification number.

16. The method of claim 15 wherein each wait time is within a range of legal wait times with a
5 minimum wait time and a maximum wait time separated by a number of units and wherein the mathematical equation comprises multiplying successive bytes of each identification number and determining a modulo of that number until all bytes are used to produce a product, then dividing the product by the modulo to produce a result and multiplying the result by the number of units in the range of legal wait times, and then adding the minimum wait time thereto to produce the
10 wait time.

17. The method of claim 16 wherein each periodic signal emitted from each wireless communication sending unit comprises an emitting of the identification number for the wireless communication sending unit a plurality of times with each emitting of the identification number
15 separated by a between-number wait time and with each periodic signal separated by a between-signal wait time.

18. The method of claim 17 wherein each wireless communication sending unit has a plurality of infrared LEDs and wherein each periodic signal comprises an emitting of the identification
20 number by each of the plurality of infrared LEDs in succession.

19. The method of claim 8 further comprising the step of enabling a transmission of information regarding the first mobile body to the wireless communication receiving unit in response to a receipt of a signal from the wireless communication sending unit, the transmission of information comprising enabling receiving an identifying signal from the wireless communication sending unit, looking up the identifying signal in a database retained on the central server, and transmitting information regarding the first mobile body from the central server to the wireless communication receiving unit.
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20. The method of claim 19 wherein the wireless communication receiving unit has a means for enabling a request for additional information regarding the first mobile body from the central server.

5 21. The method of claim 20 wherein the additional information includes an image of the first mobile body.

22. The method of claim 19 further comprising the step of initiating an automatic request for additional information regarding the first mobile body based on a predetermined condition.

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23. The method of claim 22 wherein the step of initiating an automatic request for additional information regarding the first mobile body comprises initiating an automatic request based on a receipt of periodic signals from the wireless communication sending unit for a continuous predetermined time.

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24. The method of claim 22 further comprising the step of providing a means for determining when the wireless communication sending unit has come within a predetermined approximate range of the wireless communication receiving unit and wherein the step of initiating an automatic request for additional information regarding the first mobile body comprises initiating an automatic request based on the wireless communication sending unit coming within the predetermined approximate range of the wireless communication receiving unit.

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25. The method of claim 24 wherein the step of emitting periodic signals from the wireless communication sending unit comprises emitting a first periodic signal over a first distance range and a second periodic signal over a second distance range wherein the second distance range is smaller than the first distance range and wherein the automatic request is initiated in response to a receipt of the second periodic signal by the wireless communication receiving unit.

26. The method of claim 3 further comprising the step of providing a stationary wireless communication receiving unit for being disposed in a stationary location and for receiving a signal from the wireless communication sending unit by the stationary wireless communication receiving unit when the wireless communication sending unit is in a given proximity to the
5 stationary wireless communication receiving unit thereby enabling a determination of whether the wireless communication sending unit is in the given proximity with the stationary wireless communication receiving unit and, therefore, an approximate location of the wireless communication sending unit.
- 10 27. The method of claim 3 further comprising the step of providing a continuously operable wireless communication receiving means disparate from the wireless communication receiving unit for ensuring a continuous receipt of signals from the wireless communication sending unit.
- 15 28. The method of claim 3 further comprising the step of providing a triangulation server with a means for querying the wireless access point as to a relative signal strength of the wireless communication sending unit to enable an estimate of the location of the wireless communication sending unit.
- 20 29. The method of claim 28 further comprising the step of testing signal strengths received by the triangulation server based on relative locations of wireless communication sending units and the step of comparing test signal strengths for known locations relative to received signal strengths for unknown locations to approximate unknown locations of wireless communication sending units.
- 25 30. The method of claim 3 further comprising the step of providing a means for enabling an ignoring by the wireless communication receiving unit of signals received from a selected wireless communication sending unit.

31. The method of claim 3 further comprising the step of providing a means for inducing an alert relative to the wireless communication receiving unit in response to a receipt of a signal from a selected wireless communication sending unit.

5 32. A method for the wireless information retrieval regarding persons among a group of persons and for disseminating content based on retrieved information, the method comprising the steps of:

10 providing a plurality of wireless communication sending units, each for being retained by a person about whom information is to be retrieved, wherein each wireless communication sending unit comprises a means for emitting a signal;

providing an identifying association between each wireless communication sending unit and a given person;

15 providing a plurality of wireless communication receiving units, each for being retained by a person who is to receive information, wherein each wireless communication sending unit comprises a means for receiving the signal emitted by the wireless communication sending units;

providing at least one central server for retaining information wherein the central server retains information regarding persons who are to retain wireless communication sending units;

providing at least one wireless access point;

20 establishing a wireless local area network arrangement involving the wireless communication sending units, the wireless communication receiving units, the central server, and the wireless access point;

enabling an emission of an identifying signal from the wireless communication sending units; and

25 enabling a transmission of information to a given wireless communication receiving unit regarding a person retaining a wireless communication sending unit in response to a receipt of a

signal from the wireless communication sending unit retained by that person by the wireless communication receiving unit receiving the signal.

33. The method of claim 32 further comprising the step of receiving a signal from a wireless
5 communication sending unit by a wireless communication receiving unit when the wireless communication sending unit is in a given proximity to the wireless communication receiving unit thereby enabling a determination of whether the wireless communication sending unit is in the given proximity with the wireless communication receiving unit.

10 34. The method of claim 33 further comprising the step of transmitting information to a given wireless communication receiving unit regarding a person retaining a wireless communication sending unit comprising receiving the identifying signal from the wireless communication sending unit, looking up the identifying signal in a database retained on the central server, and transmitting information regarding the person from the central server to the wireless
15 communication receiving unit.

35. The method of claim 34 wherein each wireless communication receiving unit has a means for enabling a request for additional information regarding the person retaining the wireless communication sending unit from the central server.

20 36. The method of claim 35 wherein the additional information includes an image of the person.

37. The method of claim 33 further comprising the step of initiating an automatic request for additional information regarding the person retaining the wireless communication sending unit
25 based on a predetermined condition.

38. The method of claim 37 wherein the step of initiating an automatic request for additional information regarding the person comprises initiating an automatic request based on a receipt of

periodic signals from the wireless communications sending unit for a continuous predetermined time.

39. The method of claim 37 further comprising the step of providing a means for determining
5 when the wireless communication sending unit retained by the person has come within a predetermined approximate range of the wireless communication receiving unit and wherein the step of initiating an automatic request for additional information regarding the person comprises initiating an automatic request based on the wireless communication sending unit retained by the person coming within the predetermined approximate range of the wireless communication
10 receiving unit.

40. The method of claim 39 wherein the step of enabling an emission of a signal from the wireless communication sending unit comprises enabling an emission of a first periodic signal over a first distance range and a second periodic signal over a second distance range wherein the
15 second distance range is smaller than the first distance range and wherein the automatic request is initiated in response to a receipt of the second periodic signal by the wireless communication receiving unit.

41. The method of claim 32 further comprising the step of providing a stationary wireless communication receiving unit for being disposed in a stationary location and for receiving a signal from wireless communication sending units by the stationary wireless communication receiving unit when the wireless communication sending units come into a given proximity to the stationary wireless communication receiving unit thereby enabling a determination of when each wireless communication sending unit is within the given proximity to the stationary
20 wireless communication receiving unit and, therefore, an approximate location of each wireless communication sending unit that is within the given proximity to the stationary wireless communication receiving unit.
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42. The method of claim 32 further comprising the step of providing a continuously operable wireless communication receiving means disparate from the wireless communication receiving units for ensuring a continuous receipt of signals from the wireless communication sending units.
- 5 43. The method of claim 32 further comprising the step of providing a triangulation server with a means for querying the wireless access point as to a relative signal strength of the wireless communication sending units to enable an estimate of the location of the wireless communication sending units.
- 10 44. The method of claim 43 further comprising the step of testing signal strengths received by the triangulation server based on relative locations of wireless communication sending units and the step of comparing test signal strengths for known locations relative to received signal strengths for unknown locations to approximate unknown locations of wireless communication sending units.
- 15 45. The method of claim 32 further comprising the step of providing a means for enabling an ignoring by the wireless communication receiving units of signals received from a selected mobile communications sending unit.
- 20 46. The method of claim 32 further comprising the step of providing a means for inducing an alert relative to a given wireless communication receiving unit in response to a receipt of a signal from a selected wireless communication sending unit.
- 25 47. The method of claim 32 wherein the wireless local area network employs an infrared wireless communication protocol and wherein the wireless communication receiving units comprise infrared enabled handheld electronic information devices.

48. The method of claim 34 wherein the central server retains a history of signals received by the wireless communication receiving units from the wireless communication sending units and of information transmitted to the wireless communication receiving units in response to the receipt of signals from the wireless communication sending units.

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49. The method of claim 32 further comprising the step of providing a means for preventing cross talk between the plurality of wireless communication sending units.

50. The method of claim 49 wherein each wireless sending unit emits periodic signals with at 10 least one wait time and wherein the means for preventing cross talk between the plurality of wireless communication sending units comprises a means for individually varying the wait time for each wireless communication sending unit.

51. The method of claim 50 wherein each periodic signal comprises at least one transmission of 15 an identification number for each wireless communication sending unit and wherein the means for individually varying the wait time comprises a means for generating a random wait time based on a mathematical calculation involving the identification number of the individual wireless communication sending unit.

20 52. The method of claim 51 wherein each periodic signal emitted from each wireless communication sending unit comprises an emitting of the identification number for the wireless communication sending unit a plurality of times with each emitting of the identification number separated by a between-number wait time and with each periodic signal separated by a between-signal wait time.

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53. The method of claim 51 wherein the identification number for each wireless communication sending unit is formed by a plurality of bytes and wherein the mathematical equation involving

the identification number involves a successive multiplication of the bytes forming the identification number.

54. The method of claim 53 wherein each wait time is within a range of legal wait times with a
5 minimum wait time and a maximum wait time separated by a number of units and wherein the mathematical equation comprises multiplying successive bytes of each identification number and determining a modulo of that number until all bytes are used to produce a product, then dividing the product by that modulo to produce a result and multiplying the result by the number of units in the range of legal wait times, and then adding the minimum wait time thereto to produce the
10 wait time.

55. The method of claim 54 wherein each periodic signal emitted from each wireless communication sending unit comprises an emitting of the identification number for the wireless communication sending unit a plurality of times with each emitting of the identification number
15 separated by a between-number wait time and with each periodic signal separated by a between-signal wait time.

56. The method of claim 55 wherein each wireless communication sending unit has a plurality of infrared LEDs and wherein each periodic signal comprises an emitting of the identification
20 number by each of the plurality of infrared LEDs in succession.

57. The method of claim 32 further comprising the step of providing a means for enabling a recording to the central server of information relating to a person retaining a wireless communication sending unit by a person retaining a wireless communication receiving unit.

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58. The method of claim 32 further comprising the step of providing a means for providing a scoring of levels of correlation between parameters established by a person retaining a wireless communication receiving unit and characteristics of a person retaining a wireless communication sending unit.

59. The method of claim 58 wherein the means for providing a scoring of levels of correlation between parameters established by a person retaining a wireless communication receiving unit and characteristics of a body retaining a wireless communication sending unit comprises a means for enabling a scoring of levels of correlation relative to different classes of bodies retaining wireless communication sending units employing at least one different parameter for each class of bodies.

10 60. The method of claim 48 further comprising the step of providing a means for enabling a selective review of information relating to signals received by the wireless communication receiving units and of information transmitted to the wireless communication receiving units in response to the receipt of signals from the wireless communication sending units.

15 61. The method of claim 60 further comprising the step of providing a means for enabling Internet access to details regarding the history of signals received by the wireless communication receiving units from the wireless communication sending units and of information transmitted to the wireless communication receiving units in response to the receipt of signals from the wireless communication sending units.

20 62. The method of claim 60 further comprising the step of providing a means for enabling varied levels of access to information based on user-specific authorizations.

63. A system for wireless information retrieval regarding mobile bodies and for disseminating content based on retrieved information, the system comprising:

25 a wireless communication sending unit for being retained relative to a first mobile body wherein the wireless communication sending unit comprises a means for emitting a periodic signal;

a wireless communication receiving unit for being retained relative to a second mobile body wherein the wireless communication sending unit comprises a means for receiving the signal emitted by the wireless communication sending unit;

a central server for retaining information;

5 a wireless access point; and

wherein the wireless communication sending unit, the wireless communication receiving unit, the central server, and the wireless access point cooperate to form a wireless local area network arrangement.

10 64. The system of claim 63 wherein there is an identifying association between the wireless communication sending unit and the first mobile body and wherein the wireless communication sending unit emits periodic identification signals.

15 65. The system of claim 64 wherein the wireless local area network employs an infrared wireless communication protocol and wherein the wireless communication receiving unit comprises an infrared enabled handheld electronic information device.

20 66. The system of claim 64 wherein the central server retains information regarding the first mobile body and further comprising a means for enabling a transmission of information regarding the first mobile body to the wireless communication receiving unit in response to a receipt of a signal from the wireless communication sending unit by the wireless communication receiving unit.

25 67. The system of claim 66 wherein the central server retains a history of signals received by the wireless communication receiving unit from the wireless communication sending unit and of

information transmitted to the wireless communication receiving unit in response to the receipt of signals from the wireless communication sending unit.

68. The system of claim 63 wherein there are a plurality of wireless communication sending

5 units, each wireless communication sending unit for being retained relative to a different mobile body.

69. The system of claim 68 further comprising a means for preventing cross talk between the plurality of wireless communication sending units.

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70. The system of claim 69 wherein the periodic signals emitted by each wireless communication sending unit have at least one wait time and wherein the means for preventing cross talk between the plurality of wireless communication sending units comprises a means for individually varying the wait time for each wireless communication sending unit.

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71. The system of claim 70 wherein each periodic signal comprises at least one transmission of an identification number for each wireless communication sending unit and wherein the means for selectively varying the wait time comprises a means for generating a random wait time based on a mathematical calculation involving the identification number of the wireless communication sending unit.

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72. The system of claim 71 wherein each periodic signal emitted from each wireless communication sending unit comprises an emitting of the identification number for the wireless communication sending unit a plurality of times with each emitting of the identification number separated by a between-number wait time and with each periodic signal separated by a between-signal wait time.

73. The system of claim 71 wherein the identification number for each wireless communication sending unit is formed by a plurality of bytes and wherein the mathematical equation involving the identification number involves a successive multiplication of the bytes forming the identification number.

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74. The system of claim 73 wherein each wait time is within a range of legal wait times with a minimum wait time and a maximum wait time separated by a number of units and wherein the mathematical equation comprises multiplying successive bytes of each identification number and determining a modulo of that number until all bytes are used to produce a product, then dividing 10 the product by that modulo to produce a result and multiplying the result by the number of units in the range of legal wait times, and then adding the minimum wait time thereto to produce the wait time.

75. The system of claim 74 wherein each periodic signal emitted from each wireless 15 communication sending unit comprises an emitting of the identification number for the wireless communication sending unit a plurality of times with each emitting of the identification number separated by a between-number wait time and with each periodic signal separated by a between-signal wait time.

20 76. The system of claim 75 wherein each wireless communication sending unit has a plurality of infrared LEDs and wherein each periodic signal comprises an emitting of the identification number by each of the plurality of infrared LEDs in succession.

25 77. The system of claim 66 further comprising a means for initiating an automatic request for additional information regarding the first mobile body based on a predetermined condition.

78. The system of claim 77 wherein the means for initiating an automatic request for additional information regarding the first mobile body comprises a means for initiating an automatic

request based on a receipt of periodic signals from the wireless communications sending unit for a continuous predetermined time.

79. The system of claim 77 further comprising a means for determining when the wireless communication sending unit has come within a predetermined approximate range of the wireless communication receiving unit and wherein the means for initiating an automatic request for additional information regarding the first mobile body comprises a means for initiating an automatic request based on the wireless communication sending unit coming within the predetermined approximate range of the wireless communication receiving unit.

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80. The system of claim 79 wherein the means for emitting a periodic signal from the wireless communication sending unit comprises a means for emitting a first periodic signal over a first distance range and a second periodic signal over a second distance range wherein the second distance range is smaller than the first distance range and wherein the automatic request is initiated in response to a receipt of the second periodic signal by the wireless communication receiving unit.

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81. The system of claim 63 further comprising a stationary wireless communication receiving unit for being disposed in a stationary location and for receiving a signal from the wireless communication sending unit by the stationary wireless communication receiving unit when the wireless communication sending unit is in a given proximity to the stationary wireless communication receiving unit thereby enabling a determination of whether the wireless communication sending unit is in the given proximity with the stationary wireless communication receiving unit and, therefore, an approximate location of the wireless communication sending unit.

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82. The system of claim 63 further comprising a continuously operable wireless communication receiving means disparate from the wireless communication receiving unit for ensuring a continuous receipt of signals from the wireless communication sending unit.

83. The system of claim 63 further comprising a triangulation server with a means for querying the wireless access point as to a relative signal strength of the wireless communication sending unit to enable an estimate of the location of the wireless communication sending unit.

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84. The system of claim 83 further comprising a means for testing signal strengths received by the triangulation server based on relative locations of wireless communication sending units and for comparing test signal strengths for known locations relative to received signal strengths for unknown locations to approximate unknown locations of wireless communication sending units.

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85. The system of claim 63 further comprising a means for enabling an ignoring by the wireless communication receiving unit of signals received from a selected wireless communication sending unit.

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86. The system of claim 63 further comprising a means for inducing an alert relative to the wireless communication receiving unit in response to a receipt of a signal from a selected wireless communication sending unit.

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87. The system of claim 63 further comprising a means for providing a scoring of levels of correlation between parameters established by a person retaining a wireless communication receiving unit and characteristics of a body retaining a wireless communication sending unit.

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88. The system of claim 87 wherein the means for providing a scoring of levels of correlation between parameters established by a person retaining a wireless communication receiving unit and characteristics of a body retaining a wireless communication sending unit comprises a means for enabling a scoring of levels of correlation relative to different classes of bodies retaining wireless communication sending units employing at least one different parameter for each class of bodies.

89. The system of claim 63 further comprising a means for enabling a selective review of information relating to signals received by the wireless communication receiving unit and of information transmitted to the wireless communication receiving unit in response to the receipt of signals from the wireless communication sending unit.

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90. The system of claim 63 further comprising the step of providing a means for enabling Internet access to details regarding the history of signals received by the wireless communication receiving unit from the wireless communication sending unit and of information transmitted to the wireless communication receiving unit in response to the receipt of signals from the wireless
10 communication sending unit.

91. The system of claim 63 further comprising a means for enabling varied levels of access to information based on user-specific authorizations.